SAFETY LIGHT CURTAINS

DATALOGIC AUTOMATION

SAFETY & MESUREMENT

SERIE SG-BODY "BIG" REFLECTOR

The new **SG BODY "BIG"** safety light curtain series thanks to its new housing together with the innovative design optical-electronic platform ensures the performance of high-level safety light curtain required in the material handling market.
Classical TX-RX models are now completed by **"REFLECTOR"** models made by an active unit and a complete passive unit, with integrated moulded plastic mirrors, reaching up to **8m**, available in **2, 3 and 4 beams** with 5**00, 800, 900 and 1200mm** controlled height. REFLECTOR models are provided in 2 different versions :

- **BASE** version that represents the ideal product for all applications where Muting function is not required but EDM, MANUAL/AUTOMATIC restart are fundamental;
- **MUTING** version integrates the Muting function and completes it with all advanced features associated to like anti-interference coding, 'L' o 'T' configurations, edged or triggered OVERRIDE and external Muting enable.

Total absence of "DEAD ZONE", 7 segment displays USER INTERFACE for signaling and diagnostics, alignment AID function and 3 different types of mounting brackets (SWIVELLING SIDE for "THIN MOUNTING", TOP-BOTTOM ROTATING and REAR) complete the product and make it the ideal and most performing solution for all the industrial application.

HIGHLIGHTS

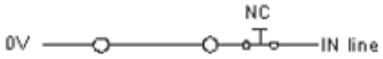
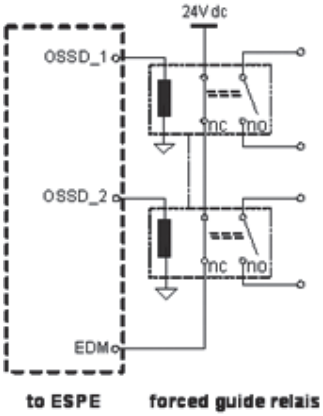
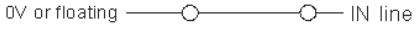
- Same big sturdy profile for both active and passive unit with same length;
- Up to 8mt operating distance;
- 2,3,4 beams with 500, 800, 900 and 1200mm controlled height;
- Two models : BASE and MUTING;
- No programming required : integrated safety functions DIP SWITCH selectable;
- Integrated muting Muting with all advanced features associated to like anti-interference coding, 'L' o 'T' configurations, edged or triggered OVERRIDE and external Muting enable.
- Same profile for active and passive unit
- Type 4 models SIL 3 and PL e

APPLICATIONS

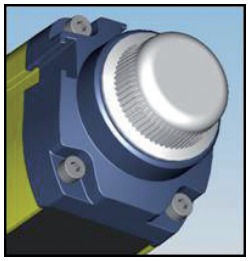
Extreme reliability and simplicity make the SG BODY safety light curtains the ideal solution for the following applications:
- Automatic machines
- Robots
- Automatic assembling lines
- Palletizers and Depalletizers

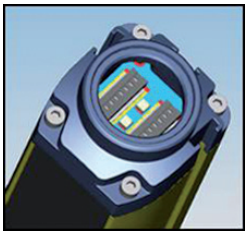
SETTINGS

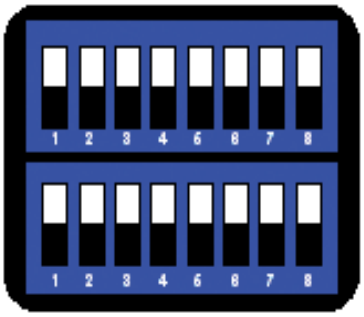
BASE VERSION
In BASE versions integrated functions can be selected or enabled through dedicate wires on ACTIVE UNIT M12 connectors

Line	Layout connection	Behaviour
RESET/RESTART/RESTART MODE		Automatic restart
RESET/RESTART/RESTART MODE		Manual restart
EDM		(EDM ENABLE: active)
EDM ENABLE		EDM enabled
OSSDs		

MUTING VERSION
A closing cap coupled with the top cap of the ACTIVE UNIT can be unscrewed to access dip-switches slot. By means of internal dip-switches the user can set-up some functions



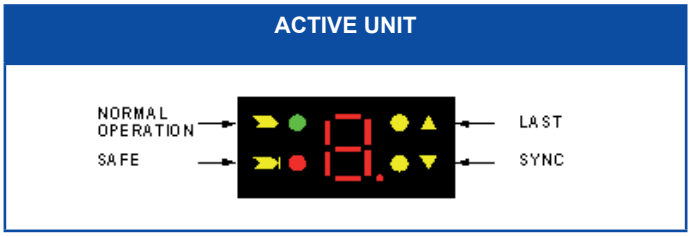




	ON	OFF
Dip switch n°1: Muting timeout Dip switch n°2: Muting T/L Dip switch n°3: Muting filter Dip switch n°4: Override restart Dip switch n°5: Override mode Dip switch n°6: EDM enable Dip switch n°7-8: not used	10 min T Disabled Manual Edged EDM on	∞ L Enabled Automatic Triggered EDM off

INDICATORS

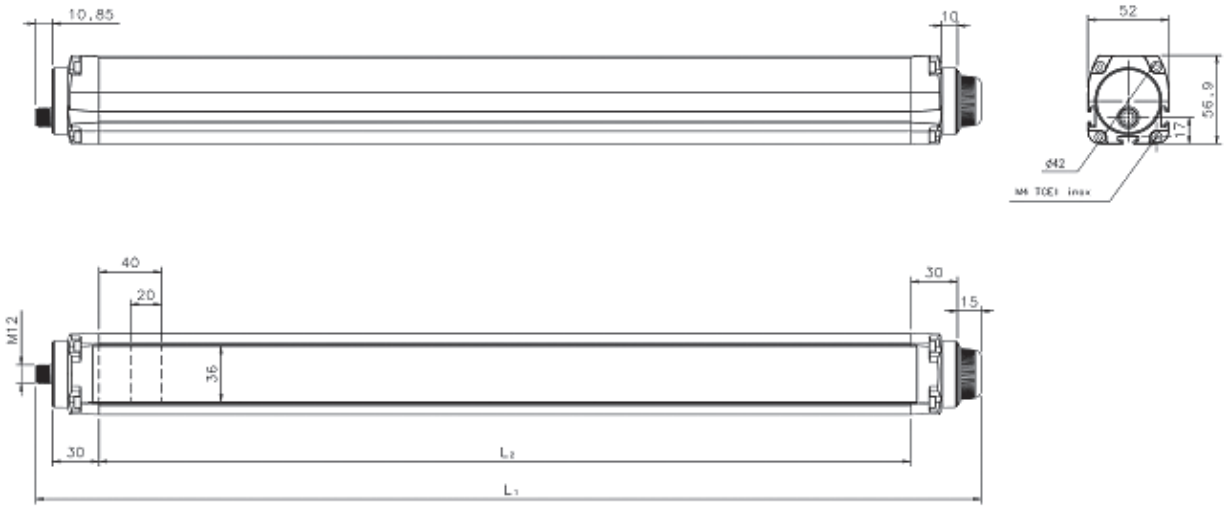
A user interface aids the customer to control and check the state of the light curtain, for alignment mode, normal operation and for troubleshooting activity. User interface is composed by four LEDs and an one-digit display on the ACTIVE UNIT.



DIMENSIONS

BASE VERSION - ACTIVE UNIT

LINEAR

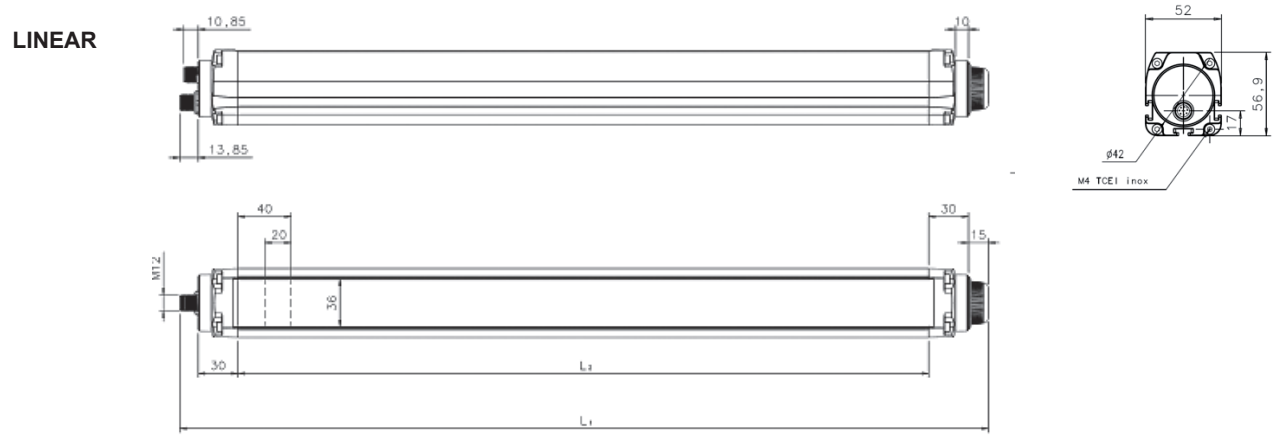


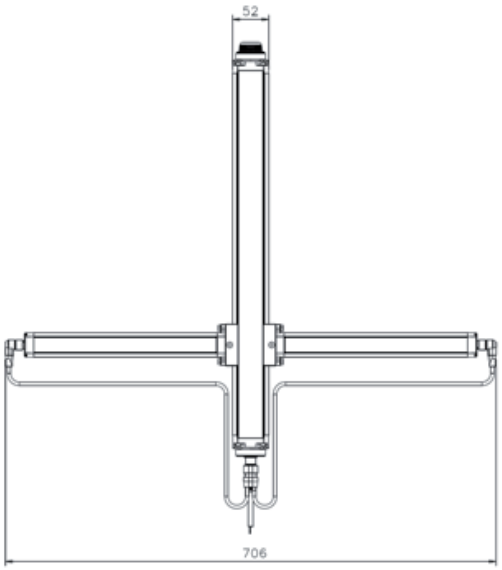
Model	L1 [mm]	L2 [mm]
SG4-RB2-050-OO-E	606,35	520,5
SG4-RB3-080-OO-E	906,35	820,5
SG4-RB4-090-OO-E	1006,35	920,5
SG4-RB4-120-OO-E	1306,35	1220,5

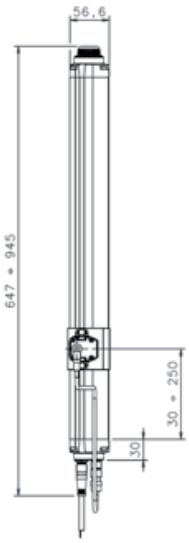
DIMENSIONS

MUTING VERSION - ACTIVE UNIT

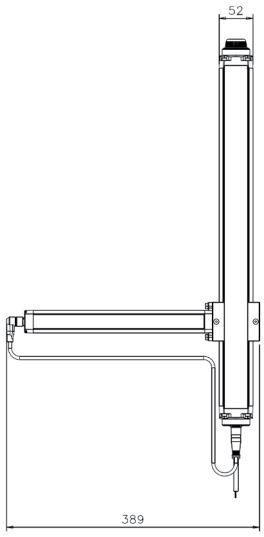
LINEAR

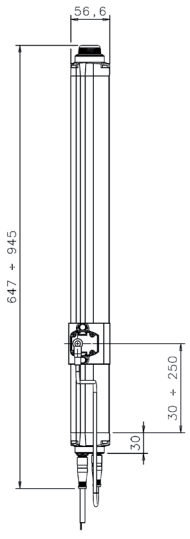






T- ACTIVE





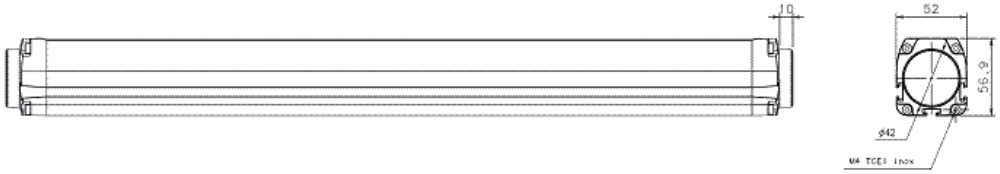
L- ACTIVE

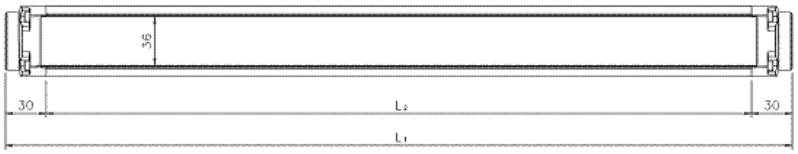
Model	L1 [mm]	L2 [mm]
SG4-RB2-050-OO-W	609,35	520,5
SG4-RB2L-050-OO-W	609,35	520,5
SG4-RB2T-050-OO-W	609,35	520,5
SG4-RB3-080-OO-W	909,35	820,5
SG4-RB3L-080-OO-W	909,35	820,5
SG4-RB3T-080-OO-W	909,35	820,5
SG4-RB4-090-OO-W	1009,35	920,5
SG4-RB4-120-OO-W	1309,35	1220,5

DIMENSIONS

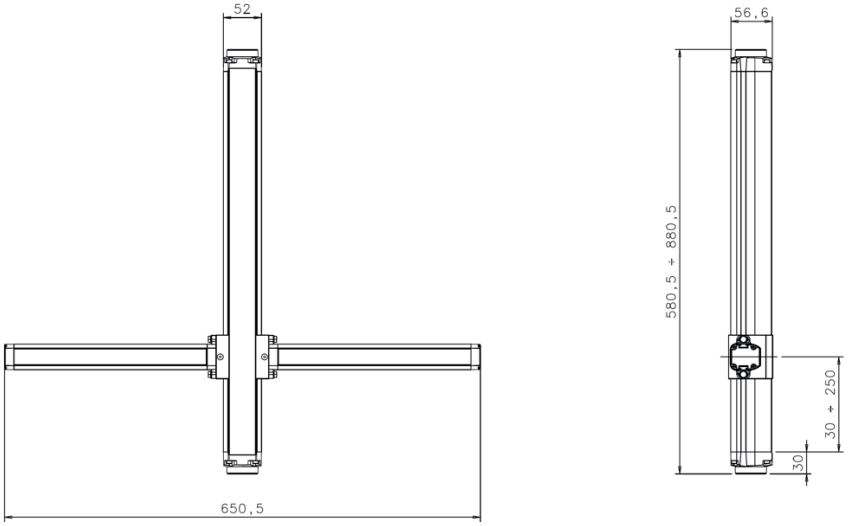
MUTING VERSION - PASSIVE UNIT

LINEAR

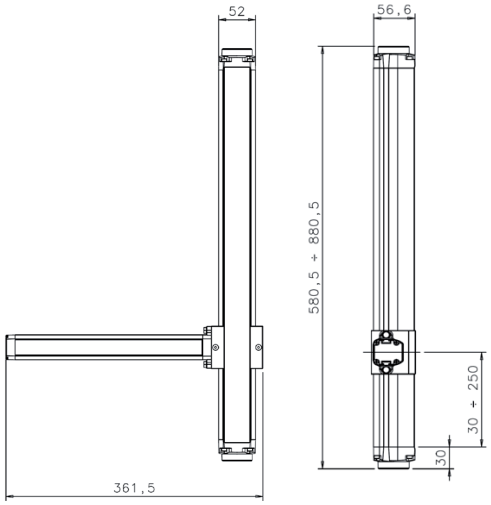




T- PASSIVE



L- PASSIVE

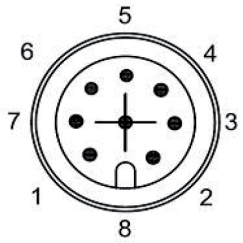


Model	L1 [mm]	L2 [mm]
SG4-RDB2	580,5	520,5
SG4-RDB2L	580,5	520,5
SG4-RDB2T	580,5	520,5
SG4-RDB3	880,5	820,5
SG4-RDB3L	880,5	820,5
SG4-RDB3T	880,5	820,5
SG4-RDB4-090	980,5	920,5
SG4-RDB4-120	1280,5	1220,5

CONNECTIONS

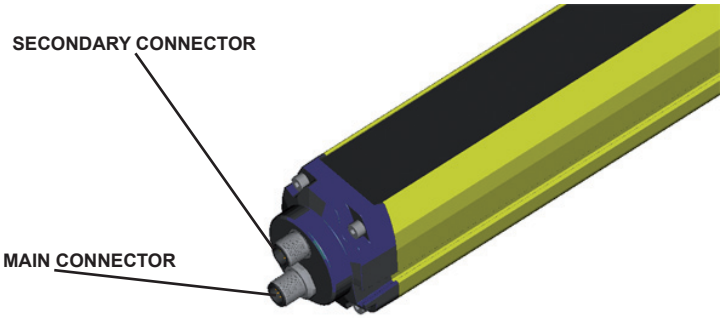
BASE VERSION CONNECTIONS

ACTIVE UNIT



M12 8-pole connector

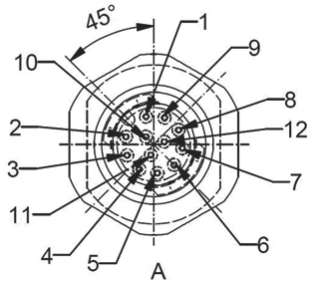
1	=	White	=	RESET/RESTART/RESTART MODE
2	=	Brown	=	24Vdc
3	=	Green	=	EDM ENABLE
4	=	Yellow	=	EDM
5	=	Grey	=	OSSD1
6	=	Pink	=	OSSD2
7	=	Blue	=	0V
8	=	Red	=	EARTH



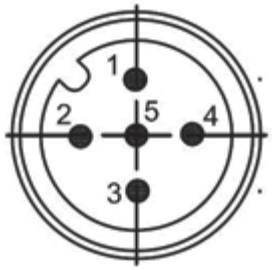
MUTING VERSION CONNECTIONS

ACTIVE UNITE

MAIN CONNECTOR



SECONDARY CONNECTOR



M12 12-pole connectors

1	=	Brown	=	24Vdc
2	=	Blue	=	0V
3	=	White	=	RESET/RESTART/RESTART MODE
4	=	Green	=	OVERRIDE1
5	=	Pink	=	OSSD2
6	=	Yellow	=	EDM
7	=	Black	=	MUTING ENABLE
8	=	Grey	=	OSSD1
9	=	Red	=	OVERRIDE2
10	=	Violet	=	LAMP INPUT
11	=	Grey-Pink	=	OVERRIDE STATUS
12	=	Red-Blue	=	EARTH

M12 5-pole connectors

1	=	Brown	=	24Vdc
2	=	White	=	MUTING2
3	=	Blue	=	0V
4	=	Black	=	MUTING1
5	=	Grey	=	N.C.

TECHNICAL DATA

	BASE VERSION	MUTING VERSION
Electrical Data		
Power supply	24 Vdc ±20%	24 Vdc ± 20%
Active unit	6.5 W max (without load)	6.5 W max (without load)
Outputs:	2 PNP outputs short-circuit protection (1.4 A @55°C)	2 PNP outputs short-circuit protection (1.4 A @55°C)
Output current:	0.5 A max / each output	0.5 A max / each output
Output voltage - ON min:	Power supply value less 1 V	Power supply value less 1 V
Output voltage - OFF max:	0.2 V	0.2 V
Output capacitive load	2.2 uF @24Vdc	2.2 uF @24Vdc
Response time:	From 11 to 12 ms See section “MODEL TABLE SELECTION”	From 11 to 12 ms See section “MODEL TABLE SELECTION”
Protected height:	from 500mm to1200mm See section “MODEL TABLE SELECTION”	from 500mm to1200mm See section “MODEL TABLE SELECTION”
Safety category:	Type 4 (ref. EN 61496-1)	Type 4 (ref. EN 61496-1)
Auxiliary functions:	Reset, Restart selection, Alignment, EDM	Reset, Restart selection, Alignment, EDM, Muting, Override
Electrical protection:	class III	class III
Connections:	ACTIVE: M12 8-poles PASSIVE: no connections	ACTIVE: M12 12-poles + M12 5-poles PASSIVE: no connections
Cable length (for power supply):	70m. max.	70m. max.
Pollution degree	2	2
Optical Data		
Light source:	Infrared LED (950 nm wavelength)	Infrared LED (950 nm wavelength)
Resolution:	319,75 mm 419,75 mm 519,75 mm	319,75 mm 419,75 mm 519,75 mm
Beam spacing:	300 mm 380 mm 500 mm	300 mm 380 mm 500 mm
Operating distance:	From 0,5 to 8 mt See section “MODEL TABLE SELECTION”	From 0,5 to 8 mt See section “MODEL TABLE SELECTION”
Ambient light rejection:	IEC 61496-2	IEC 61496-2
Mechanical and environmental data		
Operating temperature:	0…55°C	0…55°C
Storage temperature:	-25…+ 70 °C	-25…+ 70 °C
Temperature class:	T6	T6
Humidity:	15…95 % (no condensation)	15…95 % (no condensation)
Water protection grade:	IP 65 (EN 60529)	IP 65 (EN 60529)
Vibrations:	0.35 mm width, 10…55 Hz frequency, 20 sweep for each axis, 1 octave/min (EN 60068-2-6)	0.35 mm width, 10…55 Hz frequency, 20 sweep for each axis, 1 octave/min (EN 60068-2-6)
Shock resistance:	16 ms (10g) 1.000 shock for each axis (EN 60068-2-29)	16 ms (10g) 1.000 shock for each axis (EN 60068-2-29)
Housing material:	Painted aluminium (yellow RAL 1003)	Painted aluminium (yellow RAL 1003)
Caps material:	PBT Valox 508 (pantone 072-CVC)	PBT Valox 508 (pantone 072-CVC)
Front glass material:	PMMA	PMMA
Connectors:	M12	M12

TECHNICAL DATA

	BASE VERSION	MUTING VERSION
Reliability data		
PL (Ref. EN ISO 13849-1)	e	e
CAT (Ref. EN 954-1)	4	4
SIL (Ref. EN IEC 61508)	3	3
SIL CL (Ref. EN IEC 62061)	3	3
PFHD – Probability of Danger Failure (1/h)	9,28E-09	8,57E-09
T1 – Life Time (Years)	20	20
MTTFD - Mean Time to Danger Failure (Years)	462	439
DC – Diagnostic Coverage (%)	96%	96,50%
SFF – Safe Failure Fraction (%)	97,20%	97,50%
HFT – Hardware Fault Tolerance	1	1

MODEL SELECTION TABLE

BASE VERSION

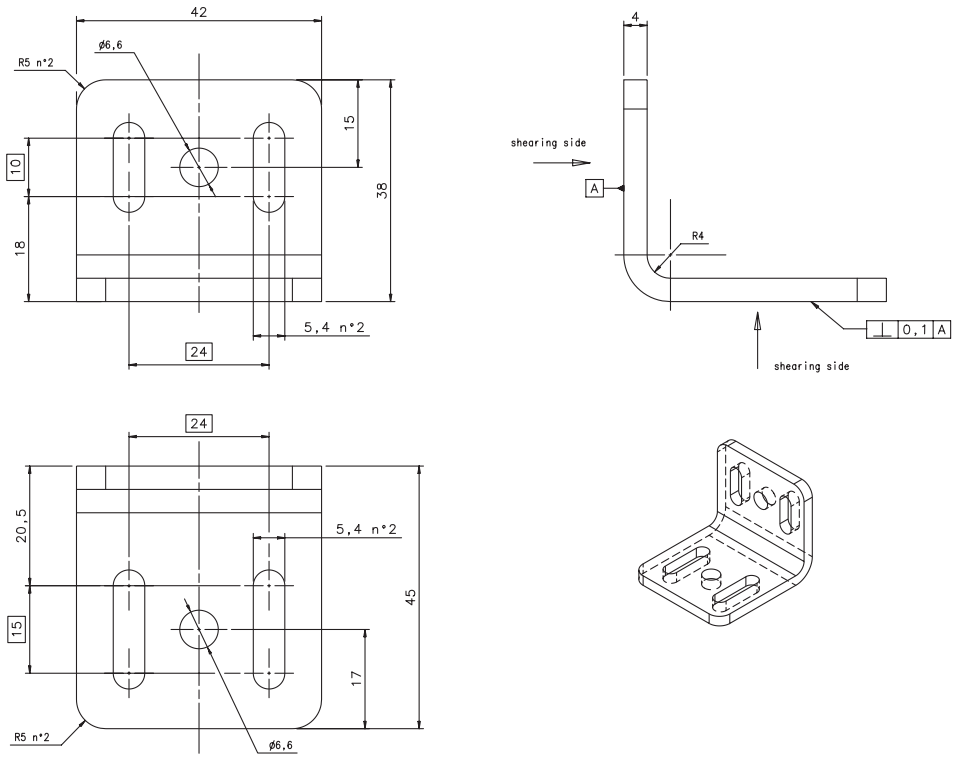
Description	Protected height [mm]	Beams N.	Respon-se time [msec]	Resolution [mm]	Interaxis [mm]	Operating distance [m]	Code
SG4-RB2-050-OO-E	500	2	11	519,75	500	0.5..8	957951000
SG4-RB3-080-OO-E	800	3	12	399,75	380	0.5..8	957951010
SG4-RB4-090-OO-E	900	4	12	319,75	300	0.5..6.5	957951190
SG4-RB4-120-OO-E	1200	4	12	419,75	400	0.5..8	957951020
SG4-RDB2 (passive)	500	-	-	-	500	-	957951100
SG4-RDB3 (passive)	800	-	-	-	380	-	957951110
SG4-RDB4-090 (passive)	900	-	-	-	300	-	957951170
SG4-RDB4-120 (passive)	1200	-	-	-	400	-	957951120

MUTING VERSION

Description	Protected height [mm]	Beams N.	Respon-se time [msec]	Resolution [mm]	Interaxis [mm]	Operating distance [m]	Code
SG4-RB2-050-OO-W	500	2	11	519,75	500	0.5..8	957951030
SG4-RB2L-050-OO-W	500	2	11	519,75	500	0.5..3	957951060
SG4-RB2T-050-OO-W	500	2	11	519,75	500	0.5..3	957951080
SG4-RB3-080-OO-W	800	3	12	399,75	380	0.5..8	957951040
SG4-RB3L-080-OO-W	800	3	12	399,75	380	0.5..3	957951070
SG4-RB3T-080-OO-W	800	3	12	399,75	380	0.5..3	957951090
SG4-RB4-090-OO-W	900	4	12	319,75	300	0.5..6.5	957951180
SG4-RB4-120-OO-W	1200	4	12	419,75	400	0.5..8	957951050
SG4-RDB2 (passive)	500	2	-	-	500	-	957951100
SG4-RDB2L (passive)	500	2	-	-	500	-	957951130
SG4-RDB2T (passive)	500	2	-	-	500	-	957951150
SG4-RDB3 (passive)	800	3	-	-	380	-	957951110
SG4-RDB3L (passive)	800	3	-	-	380	-	957951140
SG4-RDB3T (passive)	800	3	-	-	380	-	957951160
SG4-RDB4-090 (passive)	900	4	-	-	300	-	957951170
SG4-RDB4-120 (passive)	1200	4	-	-	400	-	957951120

ACCESSORY SELECTION AND ORDER INFORMATION

SIDE FIXING BRACKET



MOUNTING A

MOUNTING B

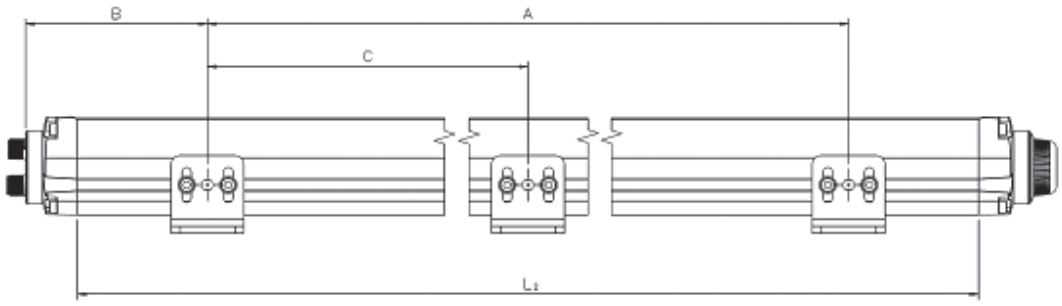
Angled fixing bracket

Angled fixing bracket + Antivibration support

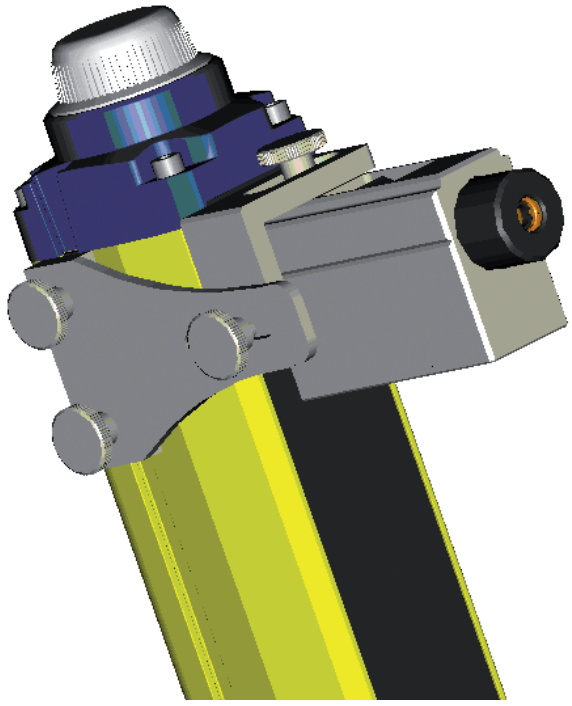
MODEL	DESCRIPTION	CODE
ST-K4STD-SG BODY BIG	Side fixing bracket (4 pcs kit)	95ASE1950
ST-K4AV	Antivibration support (4 pcs kit)	95ACC1700
ST-K6AV	Antivibration support (6 pcs kit)	95ACC1710

ACCESSORY SELECTION AND ORDER INFORMATION

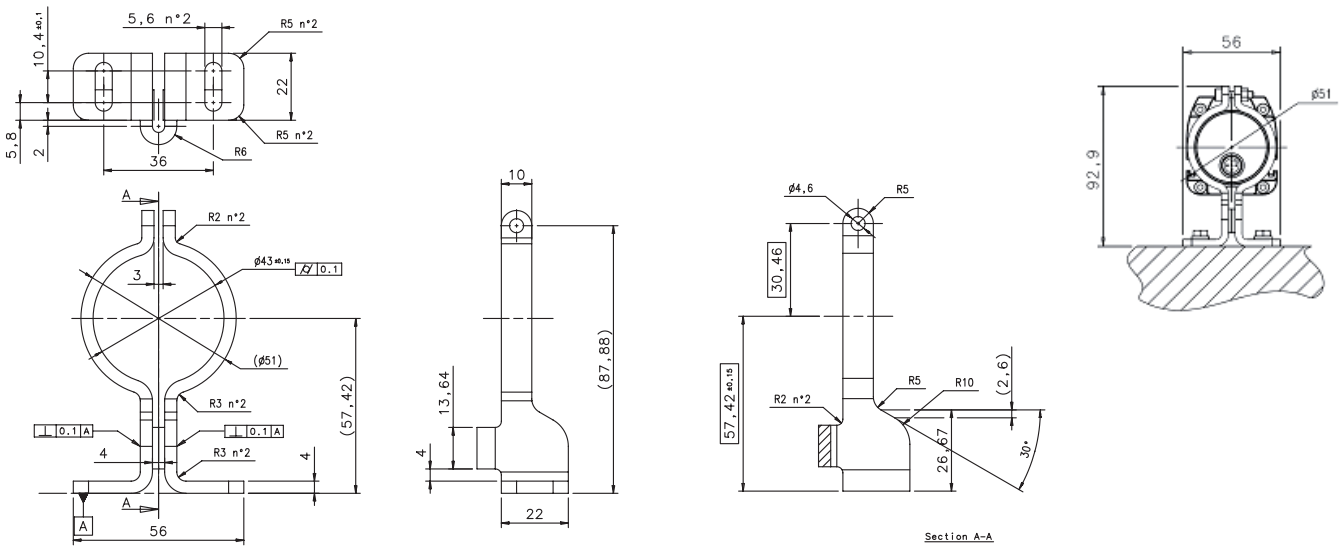
The recommended mounting positions according to the light curtain length are shown in and in the subsequent table.



DESCRIPTION	L2[mm]	A [mm]	B [mm]	C [mm]
SG4-RB2-050-OO-W	520,5	320,5	100	-
SG4-RB2L-050-OO-W	520,5	320,5	100	-
SG4-RB2T-050-OO-W	520,5	320,5	100	-
SG4-RB3-080-OO-W	820,5	370,5	125	-
SG4-RB3L-080-OO-W	820,5	370,5	125	-
SG4-RB3T-080-OO-W	820,5	370,5	125	-
SG4-RB4-090-OO-W	920,5	620,5	150	-
SG4-RB4-120-OO-W	1220,5	1020,5	100	510,25
SG4-RDB2 (passive)	520,5	320,5	100	-
SG4-RDB2L (passive)	520,5	320,5	100	-
SG4-RDB2T (passive)	520,5	320,5	100	-
SG4-RDB3 (passive)	820,5	370,5	125	-
SG4-RDB3L (passive)	820,5	370,5	125	-
SG4-RDB3T (passive)	820,5	370,5	125	-
SG4-RDB4-090 (passive)	920,5	620,5	150	-
SG4-RDB4-120 (passive)	1220,5	1020,5	100	510,25

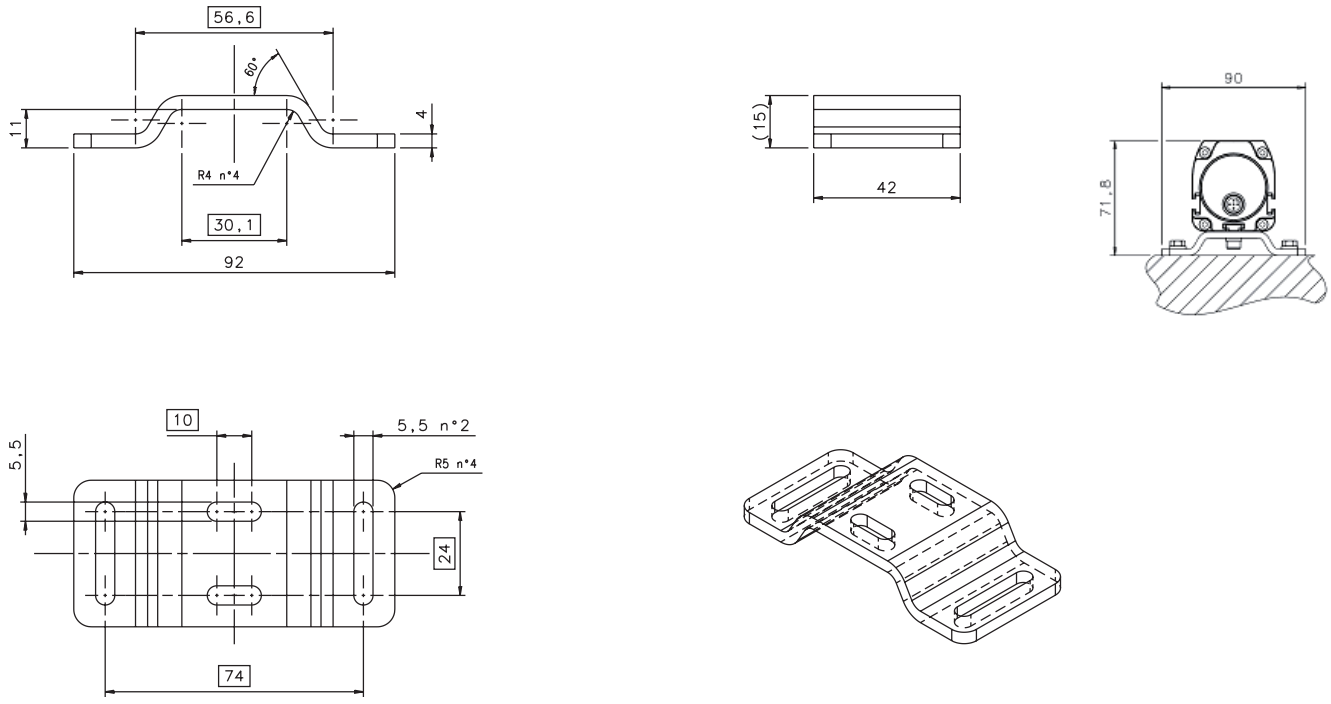


ROTATIVE FIXING BRACKET



MODEL	DESCRIPTION	CODE
ST-K4ROT-SG BODY BIG	Rotative Ficxing Bracket (4 pcs kit)	95ASE1960

REAR FIXING BRACKET



MODEL	DESCRIPTION	CODE
ST-K4REAR-SG BODY BIG	Rear Fixing Bracket (4 pcs kit)	95ASE1970

NOTE: The aforementioned fixing brackets are not available as outfit

MODEL	DESCRIPTION	CODE
SE-S 800	Column and floor stand H= 800 mm	95ACC1730
SE-S 1000	Column and floor stand H= 1000 mm	95ACC1740
SE-S 1200	Column and floor stand H= 1200 mm	95ACC1750
SE-S 1500	Column and floor stand H= 1500 mm	95ACC1760
SE-S 1800	Column and floor stand H= 1800 mm	95ACC1770
SG-SB	Protective stand base	95ASE1660
SG-PS 600	Protective stand H= 600 mm	95ASE1610
SG-PS 900	Protective stand H= 900 mm	95ASE1620
SG-PS 1200	Protective stand H= 1200 mm	95ASE1630
SG-PS 1650	Protective stand H = 1650 mm	95ASE1640
SG-PS 1900	Protective stand H = 1900 mm	95ASE1650
TP-50	Test piece Ø 50 mm	95ASE1790
TP-90	Test piece Ø 90 mm	95ASE1800
SG-LP	Laser pointer	95ASE5590
CS-A1-03-U-03	5-pole M12 cable (axial) 3 m	95ASE1170
CS-A1-03-U-05	5-pole M12 cable (axial) 5 m	95ASE1180
CS-A1-03-U-10	5-pole M12 cable (axial) 10 m	95ASE1190
CS-A1-03-U-15	5-pole M12 cable (axial) 15 m	95ASE1200
CS-A1-03-U-25	5-pole M12 cable (axial) 25 m	95ASE1210
CS-A1-03-U-50	5-pole M12 cable (axial) 50m	95A252700
CS-A1-06-U-03	8-pole M12 cable (axial) 3 m	95ASE1220
CS-A1-06-U-05	8-pole M12 cable (axial) 5 m	95ASE1230
CS-A1-06-U-10	8-pole M12 cable (axial) 10 m	95ASE1240
CS-A1-06-U-15	8-pole M12 cable (axial) 15 m	95ASE1250
CS-A1-06-U-25	8-pole M12 cable (axial) 25 m	95ASE1260
CS-A1-06-U-50	8-pole M12 cable (axial) 50 m	95A252710
CS-A1-10-U-03	12-pole M12 cable (axial) 3 m	95A252720
CS-A1-10-U-05	12-pole M12 cable (axial) 5 m	95A252730
CS-A1-10-U-10	12-pole M12 cable (axial) 10 m	95A252740
CS-A1-10-U-15	12-pole M12 cable (axial) 15 m	95A252750
CS-A1-10-U-25	12-pole M12 cable (axial) 25 m	95A252760
CS-A1-10-U-50	12-pole M12 cable (axial) 50 m	95A252770
SG-AS-ARM note 1	Active sensor single arm	95ASE1840
SG-PR-ARM note 1	Passive reflector single arm	95ASE1850
SG-F1-G1-ARMS note 2	F1-G1 muting arm for RX	95ASE1880
SG-F2-G2-ARMS note 2	F2-G2 muting arm for RX	95ASE1890
SG-CB-B	Muting C bracket big kit	95ASE1920
LMS	Muting lamp	95ASE1830
LMS-1	Modular Muting lamp	95ACC1990
LMS-2	Muting lamp - horizontal mounting	95ACC2000
LMS-3	Muting lamp - vertical mounting	95ACC2010
SU-LMS-1A	Basic module for LMS-1	95ACC2020
SU-LMS-1B	Tower module for LMS-1	95ACC2030
CV-Y1-02-B-007	M12 4-pole cable 0.7m for “T” vesions with integrated sensors	95ACC2560
CV-L1-02-B-007	M12 4-pole cable 0.7m for “L” vesions with integrated sensors	95ACC2570
SE-SR2	TYPE 4 SAFETY RELAY 3NO 1NC	95ACC6170
CS ME-03VU24-Y14	EDM RELAY BOX	95ASE1270

note 1: With RRX Muting arms the overall operating distance is reduced to **3 meters**.
note 2: With F/G Muting arms the overall operating distance is reduced to **7 meters.** F/G Muting arms **can be mounted on a passive unite but requiring external power supply**

The company endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use, the company can guarantee only the data indicated in the instruction manual supplied with the products.

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